


Human EGF protein

Cat #: PRP100159

Size: 100µg/1mg

Product Information

	Product Name: Human EGF protein		
REF	Catalog Number: PRP100159	LOT	Lot Number: Refer to product label
	Purity: ≥ 95 % as determined by SDS-PAGE		
	Storage: Store at -20°C		Preparation method: E. coli
	Shipping: The product is shipped at ambient temperature.		

Background: EGF is the founding member of the EGF-family of proteins. Members of this protein family have highly similar structural and functional characteristics. EGF contains 9 EGF-like domains and 9 LDL-receptor class B repeats. Human EGF is a 6045-Da protein with 53 amino acid residues and three intramolecular disulfide bonds. As a low-molecular-weight polypeptide, EGF was first purified from the mouse submandibular gland, but since then it was found in many human tissues including submandibular gland, parotid gland. It can also be found in human platelets, macrophages, urine, saliva, milk, and plasma. EGF is a growth factor that stimulates the growth of various epidermal and epithelial tissues in vivo and in vitro and of some fibroblasts in cell culture. It results in cellular proliferation, differentiation, and survival. Salivary EGF, which seems also regulated by dietary inorganic iodine, also plays an important physiological role in the maintenance of oro-esophageal and gastric tissue integrity. EGF acts by binding with high affinity to epidermal growth factor receptor on the cell surface and stimulating the intrinsic protein-tyrosine kinase activity of the receptor. The tyrosine kinase activity, in turn, initiates a signal transduction cascade that results in a variety of biochemical changes within the cell - a rise in intracellular calcium levels, increased glycolysis and protein synthesis, and increases in the expression of certain genes including the gene for EGFR - that ultimately lead to DNA synthesis and cell proliferation.

Sequence: Amino acid sequence derived from mature form of human EGF (NP_001954.2) (Asn 971-Arg 1023) was expressed and purified with an initial Met at the N-terminus.

Protein length: The recombinant human EGF consisting of 54 amino acids and has a calculated molecular mass of 6.3 kDa as estimated in SDS-PAGE under reducing conditions.

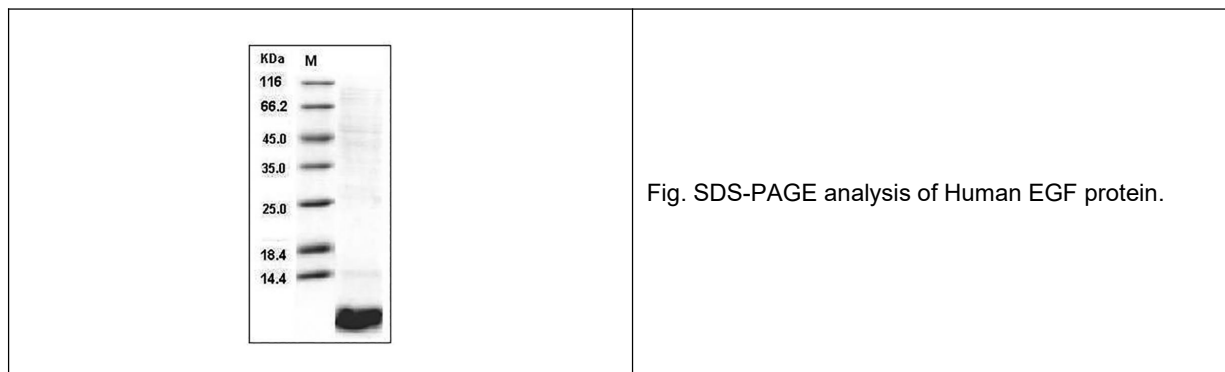
Biological Activity: Measured in a cell proliferation assay using Balb/C 3T3 mouse embryonic fibroblasts. The ED₅₀ for this effect is typically 0.02-0.2 ng/ml.

Endotoxin: < 5 EU per mg of the protein.

Formulation: Lyophilized from sterile PBS, pH 7.4.

Storage Instructions: Lyophilized Human EGF protein product should be stored desiccated below -18°C. Upon reconstitution, the protein should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Usage notes: Always centrifuge tubes before opening. It is recommended to reconstitute the lyophilized Human EGF protein in sterile ddH₂O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.



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